NEGOTIATE

Overcoming early job-insecurity in Europe

Explaining employers' hiring decisions: A comparative study of employers' risk assessment

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CONTENT

Abstract

In order to investigate the scarring effect of early job insecurity on future employment chances we have implemented a factorial survey experiment with recruiters based on real vacancies in Bulgaria, Greece, Norway and Switzerland. We contribute to recruitment research at least in three ways: First, the multi-national design allows us to run comparative analysis across countries, which are carried out along the national dimensions youth unemployment rate, employment protection regulation and type of educational system. Second, we differentiate between two different forms of early job insecurity – unemployment and work experience in deskilling jobs, and we demonstrate that the sole focus on unemployment, as it is the case in the prevalent labour market research, is not sufficient in order to fully understand labour market outcomes caused by different forms of job insecurities. Third, since our sample consists of real recruiters who were hiring for current jobs at the time when the study was carried out, we provide a unique cross-country data set of high external validity. Our findings suggest that scarring effects of early job insecurity vary across countries and across occupational fields, and while scarring caused by work experience in deskilling jobs seems to be enforced by strong employment protection regulations, unemployment scarring seems to stronger where national unemployment is low. Further, the differences in recruiter's evaluation across occupational fields indicate that signalling value of education may vary depending on specific sectors. Not at least, we contribute to debates around active labour market policies, arguing that measures aiming at quick labour market reintegration without consideration of job quality may not be the most sustainable solution, as work experience in a deskilling job does not lead to better recruiter's evaluation.

1 Introduction

Experienced early job insecurity may signal low abilities in the employers' eyes and impede individuals' future employment chances. Young people graduating in times of recessions are believed to be particularly prone to end up in insecure jobs, which in turn could hamper their future career at long-term (Helbling et al. 2017). European countries have been hit by the recent economic crisis to different degrees, and the proportion of young people in job insecurity varies greatly. In this deliverable, we focus on two signals of early job insecurity, unemployment spells and job experience in sectors that do not match one's training, using the example of having worked in a call centre for extended periods of time. While the effects of unemployment have been studied extensively, little attention has been given to consequences of work in deskilling jobs. In principle, working in any job may be expected to be deskilling to the extent that previously acquired qualifications are no longer used and further trained. However, the skill depreciating impact of such jobs may be especially strong for non-demanding jobs with low requirements. Against this backdrop, call centre work may be expected to have a strong deskilling impact. Understanding subsequent impacts of work experience in deskilling jobs is important, since it is not uncommon for young people, who

face difficulties to find level and field adequate jobs, to take up any jobs in order to support their livings. We investigate unemployment and deskilling work experience as potentially harmful signals for recruiters' evaluations of job candidates in the countries Bulgaria, Greece, Norway and Switzerland, across five occupational sectors (mechanics, nursing, information and communication technology, finance, catering) and three educational levels. The selected countries have been chosen because they vary in their economic and institutional contexts (Hyggen et al. 2016). Fictive CVs with experimentally varied employment trajectories and educational credentials are evaluated by real recruiters hiring for real jobs in regard of the applicant's employability.

From the perspective of *human capital theory* unemployment can be seen as forgone chances to gain work-relevant skills and knowledge (Becker 1964; Pissarides 1992). In addition, previously acquired human capital might depreciate during the time of inactivity, whereas especially specific skills as opposed to general skills and perishable skills in contrast to basic skills are supposed to deteriorate faster (Möller 1989). Studies have also shown that the degree of human capital deterioration is expected to be more severe with increasing length of unemployment spell (Gregory and Jukes 2001; Kroft et al. 2013). In this view, employers are expected to be careful about hiring applicants showing discontinuous trajectories, and employment chances can be expected to decrease with increasing length of unemployment spells, which is also referred as duration dependence. According to *signalling theory*, one of the basic problems in recruitment is information asymmetry (Spence 1973). In order to reduce uncertainty, recruiters draw on visible cues – or the so called signals – such as applicant's education background or (un)employment experience trying to predict the applicant's qualities. Previous studies have found that employers tend to associate unemployment with unobservable negative qualities such as low productivity, low motivation or other negative traits (Atkinson et al. 1996; Bonoli 2014; Devins and Hogarth 2005), and they would be careful about hiring applicants with experienced unemployment.[1]

In contrast to unemployment, *work experience in deskilling jobs* has been less addressed in labour market research so far. There is a body of literature on job mismatch looking at the consequences of over- and underqualification (Dolton and Vignoles 2000; Hartog 2000; McGuinness 2006; Rubb 2003). A smaller body of literature has investigated the effects of mismatch in field specificity (Robst 2007; Nordin et al. 2008). The findings are mixed: On the one hand, previous mismatches in the applicant's career can be understood as inability to find an adequate job and therefore interpreted as a negative signal (Karren and

[1] Theoretical frameworks explaining unemployment scarring are discussed in NEGOTIATE working papers 6.1 and 7.1 (Shi et al. 2015; Helbling et al. 2016).

Sherman 2012; Nunley et al. 2016), and on the other hand, it can be perceived as commitment and motivation to work (Athey and Hautaluoma 1994). In this working paper we are analysing the consequences of work experience in deskilling jobs, using the example of having worked in a call centre, which captures horizontal (field specificity) as well as vertical (skills level) mismatch. Such mismatched job experience lasting for a short period might not have detrimental influence on the individual's future employment chances, but if stuck in a low quality job for an extended period, future employers might perceive such experience as negative signal and assume human capital deprivation to have happened.

2 Analytical dimensions

In order to analyse how employers evaluate experienced job insecurity, it is important to understand the country and sector specific institutional contexts, since employers' perceptions are not simply driven by personal taste and considerations of individual productivity. Rather, determining factors are found at the institutional level, such as the overall labour market condition (Blanchard and Diamond 1989), and at the organisational level, such as the sector belonging and firm characteristics (Atkinson et al. 1996). Depending on the composition of the contextual factors, recruiters might judge experienced job insecurity differently, which in turn leads to different hiring outcomes. Hence, we propose to analyse the results along the following dimensions: At the national level we look at the *shares of young people in unemployment and in unskilled jobs*, the *employment protection regulations* and *school-to-work transition systems*, and within the countries we compare recruiters' evaluations across *occupational sectors*.

Impact of the general level of early job insecurity on its signalling power

The overall economic situation in a country with the unemployment rate as an important indicator is an essential factor determining how employers evaluate individuals' (un)employment experiences. It has been argued that an individual's unemployment has less negative impact on future job search if the overall unemployment rate is high, because it is less stigmatising if many people are unemployed and unemployment is associated less with individual's failure (Biewen and Steffes 2010; Gibbon and Katz 1991; Imbens and Lynch 2006). Other authors demonstrate the contrary and have found that the exit rate from unemployment to decrease if the unemployment rate is high (Dynarski and Sheffrin 1990; Lynch 1989). However, since these studies measure the exit rate from unemployment based on longitudinal survey of the workforce, it is not possible to determine how much of the employment outcomes are caused by the employers' hiring criteria and to what degree they are due to the self-selection of the applicants. Controlling for the applicant's job finding behaviour, we argue that in the recruiters' eyes the signal of unemployment becomes noisier if the unemployment rate is high, and we expect to find less unemployment scarring in countries with higher unemployment rate. Similarly, we assume that in countries with few job opportunities

and with a larger proportion of overqualified people working in low skill jobs, employers show more tolerance towards applicants with work history in deskilling jobs due to the increased noise in such signals.

In our country sample Bulgaria and Greece have been hit more severely by the recent economic crisis resulting in high youth unemployment rate, especially as far as Greece is concerned, while Norway and Switzerland are characterised by stable economies and low-level youth unemployment rates. According to EUROSTAT Switzerland and Norway have had a relatively low share of 10% unemployed young people in the age span from 15 to 24 in 2015. Bulgaria shows a considerably higher share of 22%, whereas Greece with 50% has had by far the highest share of unemployed young people (Karamessini et al. 2016; Imdorf et al. 2016a). The national NEET rates (Not in Education, Employment or Training) reported by EUROSTAT for 2015 (EUROSTAT 2015), which take into consideration a higher age range of young workers (20 to 34 years) show a similar ranking between the four countries: Switzerland and Norway have a relatively low share of young people in in NEET (8.8% and 10.1 % resp.); Bulgaria shows a considerably higher share of 25.2%, whereas Greece with 32.4% has the highest share of young people in NEET. Relating the level of youth unemployment to the signal strength of experienced unemployment in a young job applicants CV we therefore hypothesise:

H1a: Unemployment scarring is lowest in Greece, followed by Bulgaria, and highest in Norway and Switzerland.

With regard to the share of young skilled workers in unskilled jobs, no comparative national figures are available. We therefore consider the share of young workers in unskilled jobs as a proxy indicator to assess the countrywide signal strength of having a work history in deskilling jobs. However, this indicator needs to be interpreted carefully in view of a country's early school leaver rate, that is the share of young people with most lower secondary education as the respective rate might impact on the share of young workers in unskilled jobs. EUROSTAT data on the one hand allow to calculate reliable shares of 15 to 39 years old employed persons in unskilled jobs, measured by the major ISCO-08 groups of Plant and Machine Operators and Assemblers (major group 8) and Elementary Occupations (major group 9), by country and year. According to the respective statistics for the year 2015, 22% of the young employed have worked in unskilled jobs in Bulgaria, 12% in Greece, 10% in Norway, and 6% in Switzerland.[2] Likewise based on the EU Labour Force Survey, EUROSTAT offers on the other hand statistics of early leavers from education and training of the population aged 18-24 with at most lower secondary education and not in further education or

[2] Own calculations based on http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_egais

training.[3] The respective shares for the years 2010 and 2015 have been relatively stable for Bulgaria with 13% and for Switzerland with 7% to 5%. In contrast, both Greece and Norway have considerably reduced their shares from 14% to 8% (GR) and from 17% to 10% (NO) in the respective years. If the country-specific shares of young workers in unskilled jobs, the share of early school leavers as well as the youth unemployment rates according to Table 1 are taken into consideration, and if one assumes that early school leavers are most affected by either youth unemployment or unskilled work, skilled young persons are probably least often found in unskilled jobs in Switzerland (lowest figures for all three indicators), whereas the respective risk seems to be especially high in Bulgaria (the share of young workers in unskilled jobs is considerably higher compared to the share of early school leavers, who might additionally be affected by unemployment).

Table 1 Share of young people in unemployment and unskilled jobs, and early school leaver rates in Bulgaria, Greece, Norway and Switzerland.

	Bulgaria	Greece	Norway	Switzerland
Youth unemployment (15 to 24 years), 2015	22%	50%	10%	10%
Share in unskilled jobs (15 to 39 years), 2015	22%	12%	10%	6%
Early school leavers, 2015	13%	8%	10%	5%

The shares of skilled workers in unskilled jobs in Norway and Greece can be expected to be higher compared to Switzerland but lower than in Bulgaria. We therefore assume:

H1b: The scarring effect of job experience in a deskilling job is lowest in Bulgaria, followed by Greece and Norway, and highest in Switzerland.

Signalling of early job insecurity in the light of national employment protection legislation

A strong employment protection legislation (EPL) may prevent workers from becoming dismissed, but it may also increase recruiters' caution to employ applicants, since once hired, employers cannot fire unsuitable workers easily (Breen 2005). Such adverse effects are particularly likely for young people with few labour market experience and the unemployed, who do not clearly signal their productivity. It has been shown that strict employment protection can lead to high youth unemployment rate (Breen 2005; de Lange et

[3] http://ec.europa.eu/eurostat/tgm/table.do?tab=table&plugin=1&language=en&pcode=t2020_40

al. 2014; van der Velden et al. 2001). However, there is a lack of literature investigating the impact of employment protection on scarring effects of previously experienced job insecurity. Recruiters in countries with strict employment protection may be expected to be more careful about hiring applicants with any sort of early employment problems – including both unemployment and deskilling work – and prefer candidates without signals that could indicate problematic candidate characteristics, as hiring unsuited job candidates has more severe consequences compared to countries with low employment protection. We thus suggest to consider EPL as a source of between-country differences in scarring effects of both unemployment and deskilling job experience. In order to alleviate the problem of confounding the effects of unemployment level and EPL, we only compare countries showing similar share of young people in unemployment or in unskilled jobs. According to the OECD indicators of EPL, Switzerland shows very low protection against individual dismissal (1.50), followed by Greece (2.07) and Norway with the high protection (2.23) (OECD 2013). In Bulgaria low level of protection against collective dismissals is measured[4] (Hora 2016). This national variation is confirmed by the Index of Economic Freedom (Labour Freedom Index) provided by the Heritage Foundation[5]: The 2016 data show Switzerland and Bulgaria with a relatively high labour freedom (72 points for both countries) in contrast to Greece and Norway with lower labour freedom index points (50 vs. 49 points). By drawing on these indicators and recalling that the youth unemployment is similar in Norway and Switzerland (10%), we assume:

H2a: Unemployment scarring is lower in Switzerland than in Norway (due to higher employment protection in Norway compared to Switzerland)

For Bulgaria and Greece such comparisons cannot be made, since the differences in unemployment rates are pronounced.

When recalling the share of young people in unskilled jobs, Greece (12%) and Norway (10%) show similar shares. This would allow a comparison of the EPL effect on scarring effect caused by experience in deskilling jobs between Greece and Norway. Yet, both countries are characterised by a relatively high employment protection. It is therefore not clear what impact the employment protection has on scarring

[4] The OECD does not include data on the Bulgaria employment protection against individual dismissal.

[5] The Labour freedom index is composed of six quantitative factors: ratio of minimum wage to the average value added per worker, hindrance to hiring additional workers, rigidity of hours, difficulty of firing redundant employees, legally mandated notice period, and mandatory severance pay. The index is based on data collected in connection with the World Bank's Doing Business study, see http://www.theglobaleconomy.com/rankings/herit_labor_freedom/

effect caused by job experience in deskilling jobs. If ignoring the differences in the share of young people in unskilled jobs, the following hypothesis could be made:

H2b: The scarring effect of job experience in deskilling jobs is lower in Switzerland and Bulgaria compared to Norway and Greece.

This would be however at odds with H1b.

It is an open question whether the scarring effect of deskilling work experience depends more on the overall share of young people in unskilled jobs (H1b) or more on the national employment protection regulations (H2b). It could plausibly be assumed that this determined by whether the rate of young people in unskilled job exceeds a certain threshold: If the rate is below the threshold, such experience may serve as an informative signal for recruiters to predict applicants' productivity, and low employment protection would play an important role in encouraging employers to nevertheless risk hiring applicants with experience in deskilling jobs. If the overall share of youth in unskilled jobs does exceed a certain level, the signal of an individual's experience in deskilling jobs becomes too noisy and recruiters could not derive any information about the applicants' productivity. In the latter case unemployment regulation would not matter. However, it is not possible to test this assumption here as between-country variation in the share of young people in deskilling jobs is small in our sample.

Signalling of early job insecurity in different school-to-work transition system

The institutionalised linkage between a country's educational system and the labour market has been discussed as an important influencing factor for school-to-work transitions and youth employment (Gangl, 2003; van der Velden and Wolbers, 2003). Comparatively smooth transitions are found in employment centred countries with strong focus on the initial vocational education training (IVET) at the upper secondary level (Müller 1998). There are various ways to compare the prevalence of IVET across countries. One indicator is the relative number of yearly IVET graduates as it might reflect the societal valuation towards vocational education. Further, it is necessary to differentiate between different organisational types of vocational education. Dual-tracked VET systems, where education and training take place in parallel at the work place and at school, are said to particularly foster school-to-work-transitions (Allmendinger 1989; van der Velden and Wolbers 2003), since as opposed to school-based VET systems, employers and professional associations have a stronger stake in the curriculum development, governance and supply of IVET. The strong involvement of labour market actors strengthens the alignment of IVET programmes to labour market needs. Hence, in countries with dual-track IVET, the respective certificates serve as highly informative signals of occupation-specific skills, and recruiters' trust in vocational credentials is higher compared to countries with school-based VET. Dual-track IVET is therefore considered to result in a lower share of upper

secondary VET graduates unable to find connecting jobs (Breen 2005; Kerckhoff, 1995; Sacchi et al. 2016). Switzerland, with a 65.6% of all upper secondary students participating in IVET in 2014, has an educational system that is strongly characterised by the dual system, which is highly recognised in the country (Buchmann and Sacchi 1998; Hora 2016; SERI 2015). Due to the relatively secure school-to-work linkage for the upper secondary VET degree holders in comparison to applicants with lower secondary or tertiary degrees (Imdorf et al. 2016b), it can be assumed that in Switzerland recruiters' expectations of continuous trajectory without job mismatch in a job applicant's CV is higher for the first group than for the latter two. Hence, scarring effects of having worked in level and field inadequate jobs can be expected to be the strongest for the upper secondary VET degree holders. In comparison to Switzerland, the participation rates in IVET are lower in Bulgaria (53.7%), Norway (50.7%) and Greece (31.5%) (Hora 2016). Also, the prevalence of dual-tracked VET is the most pronounced in Switzerland, and to a lesser extend in Norway (Bäckman et al. 2011; Bjerkeng 2015), whereas vocational education and training in Bulgaria and Greece are mainly school-based (Cedefop 2014; Georgiadis 2014; van der Velden et al. 2001). Hence, unlike in Switzerland and to a lesser extend in Norway, the upper secondary VET degree holders in Bulgaria and Greece do not necessarily enjoy smoother school-to-work transitions as compared to graduates of general education. Accordingly, for these two countries we expect to observe less scarring difference between applicants with different education attainments.

H3: In Switzerland the upper secondary VET degree holders experience the strongest scarring when showing signals of previous job insecurity (stronger than holders of lower secondary or tertiary degrees), followed by Norway, whereas in Bulgaria and Greece little differences in the degree of scarring between applicants with different education backgrounds are expected.

Unemployment signalling in different occupational fields

There is a rich amount of studies investigating how gender, ethnicity or age discrimination in hiring can vary across different occupational fields (Becker, 1971; Imdorf 2008, 2011; Neumark et al. 1996; Riach and Rich 2006), but only few studies have addressed the issue whether and how experienced early job insecurity may be evaluated differently by employers in different occupations. In a Swedish study (Eriksson and Rooth 2014) it has been found that unemployment can lead to different hiring outcomes depending on the skill level of the occupation, and that these differences could not be explained by the occupation specificities. In a similar study carried out in the US (Kroft et al. 2013) on the other hand, stronger duration dependence for sales jobs is reported as in comparison to administrative, clerical and customer service jobs. In this working paper we propose to compare recruiters' evaluations of unemployment between occupational fields and to analyse the occupational variations across countries. There are various factors that may cause occupational differences. We suggest to analyse the results in regard of the type of required human capital in the occupational fields. As opposed to generic skills, it has been argued that specific skills deteriorate faster if not practiced at work place (Becker 1993; Möller 1989). Consequently, it can be assumed that experienced

unemployment is evaluated the most rigorously in sectors, where technological innovations are fast-paced and cycles of knowledge are short. If out of work for a certain time, applicants might not be equipped with the up-to-date skills. A good example of such a sector is the field of information and communication technology (ICT), in which technological innovation can be expected to play a more prominent role than in the other four surveyed sectors mechanics, finance, catering and nursing. We are aware of other possible determining factors, which could also cause differences in unemployment scarring between the occupational fields. Labour market tightness, which is measured as the ratio of the number of the unemployed and the amount of vacancies, has been identified as a possible influencing force in explaining hiring dynamics (Baert et al. 2015). Yet, due to a lack of data on the labour market tightness in each of the country-specific occupational field, we can only point out to some ambivalent results of previous studies: Some studies have found stronger duration dependence when the labour market is tight – meaning that the disadvantage of long-term unemployment does not vary with labour market tightness (Imbens and Lynch 2006; Kroft et al. 2013). Other studies have suggested the contrary (Dynarski and Sheffrin 1990; Shimer 2005). Again others have found the relation between duration dependence and labour market tightness to vary for different social groups (e.g. Abbring et al. 2001). Without more detailed data on labour market tightness for the different occupational fields in the four select countries we will tentatively interpret the results arguing with the differences of required human capital across the occupational fields and formulate the hypothesis:

H4: Scarring effects of unemployment are stronger in ICT jobs as compared to in mechanics, finance, catering and nursing jobs.

3 Data and methods

Research design

We conducted a multi-national recruiter survey in which we embedded a factorial survey experiment and a choice task. In contrast to other forms of field experiments applied in recruiter studies, such as conjoint or audit studies, in which researchers usually vary only one or few applicants' characteristics experimentally, in factorial survey experiments it is possible to vary multiple applicant features at once. This allows to create a pool of hypothetical candidates with a large number of combinations of individual characteristics, such as education level and job experience, and to measure their single and joint effects on the recruiters' evaluations. Also, it permits to disentangle effects, which may covary in a real world setting (e.g. occupation and gender), by holding the dimensions orthogonal in the experimental design. The experimental variables and their interactions can therefore be tested isolated from each other and their effects can be singled out in the analysis.

To assess between-job heterogeneity we sampled vacant jobs in information and communication technology, finance, catering, nursing and mechanics. This provides us with low, middle and high skill jobs, gender-mixed and gender-typed jobs, occupations more ore less dependent on and linked to technological innovations, as well as to account for jobs with higher and lower turnover rates.

It should be noticed that given the small number of countries, our attempts to identify relevant factors behind the observed cross-country differences inevitably are tentative. Our analysis should rather be considered as a comparative multiple case study than a quantitative comparative country analysis in the narrower sense. However, we will be able to enrich the analysis of factorial experiment with additional data from the recruiter survey in the future, allowing us to analyse scarring effects on the meso level of the occupational fields and on the micro level of the recruiting firms.

Sampling

To maximise internal and external validity we chose to sample real vacancies in Bulgaria, Greece, Norway, and Switzerland. With real vacancies, we mean open job positions that were advertised during our data collection period. We sampled in the five above-mentioned occupational fields of mechanics, finance (banking and insurance), catering (service personnel), nursing and information technology (ICT) (see Hyggen et al. 2016 for further details). To ensure a sufficient match between the requirements of the selected vacancies and the characteristics of the hypothetical job candidates on the vignettes, we have developed internationally comparable sampling criteria for each occupational field based on selected four-digit ISCO-08 codes as documented in Hyggen et al. (2016). By restricting the sampling of job ads to a narrow selection of detailed ISCO-Codes, we assure a reasonable fit between job profile and standardised vignettes designed for each occupational field. For each sampled job, we conduct a web-survey with an embedded factorial experiment among the recruiters who were currently in charge of filling the posted job. Our detailed sampling strategies including the choice of job advertising communication channels, the exact procedures of how recruiters were contacted as well as national specific adaptions of the standardised sampling methods are described in Hyggen et al. (2016).

The data collection took place from May to June 2016. 1,920 respondents completed the full survey and rated in total 20,600 CV. This results in a global response rate of 16 %. The response rate was highest in Switzerland (27%) and lowest in Greece (10%). Not all respondents have completed the entire survey but may have rated the CVs. In this working paper we also include the vignette ratings of uncompleted surveys.

Experimental variables

To gauge the signalling effect of unemployment and the moderating effects of education and work experience we set up a $9^1 7^1 2^2$-design. The experimental variables are combinations of field specificity and level of education with work experience (nine categories), different combinations of duration and timing of unemployment (seven categories), gender (two categories), and a national specific variable that allows to capture country specific recruitment issues (two categories) (Table A.1, in Appendix), resulting in a vignette universe of 252 vignettes. This means that our design implies 252 possible combinations of signals. Based on pre-test response rates we decided to field a fraction of 180 vignettes in Norway and Switzerland and a subset of 130 vignettes in Bulgaria and Greece. Both subsets have been optimised for maximal D-efficiency and minimal confounding (Auspurg and Hinz 2015). While vignette fractions and decks have been optimised so as to efficiently estimate our parameters of interest, further steps were taken to ensure high data quality. This was enabled through randomising the order of vignettes within decks and randomising the order in which decks were allocated to respondents.

The variable specificity of education and work experience reflects whether the applicant is trained and has worked in one of the five defined occupations or in an unrelated occupational field. The variable has three categories: Field specific education and work experience, non-field specific education and work experience, and field specific education and work experience in deskilling jobs. In order to define suitable education credentials for vignettes with field specific education and work experience for each of the five occupational fields we used the official career counselling webpages, which provided detailed information about the required education and skills for specific occupations in all countries. The category non-field specific education and work experience is operationalised by education credentials and respective work experience in the retail trade sector. The category field specific education and employment experience in deskilling jobs represents job candidates with the educational credential matching the occupational field of the sampled job position but who feature work experience as call centre agent. Together with three possible variations of level of education and work experience (low, middle, high) we have nine different combinations of education and work experience that differ in the field specificity and level. All hypothetical candidates have gained their work experience in jobs with a skill level that is consistent with the level of education, which means that a lower secondary degree holder always is defined to have work experience in a low skill job, and respectively upper secondary degree holder in a middle skill job and tertiary degree holder in a high skill job. For example, a candidate with a BA degree (tertiary degree) in advanced mechanics (educational specificity matching the occupational field) would show job experience as a chief mechanic (high skill level job matching the occupational field). Work experience as call centre agent is an exception and can follow either lower secondary, upper secondary or tertiary level of education. Our design allows disentangling duration and timing of unemployment. However, in this paper we dichotomise this variable. The gender of the applicant is either female or male. Finally the country specific dummy variable in Greece and Norway measures whether the applicant has participated in a Labour Market Activation Programme (ALMP) during unemployment. In Bulgaria it measures whether the applicant shows worked abroad job experience, and in

Switzerland whether the applicant has changed jobs frequently (job hopping). To enable comparison, however, the county specific variables were omitted from the analyses presented in this working paper.

In our design employers are asked to rate CVs of ten hypothetical applicants (the vignettes) to the position they are currently recruiting for[6]. The statement reads "What are the chances for a candidate with the above shown CV to be considered for the advertised job?" providing a rating scale ranging from 0 "practically zero" to 10 " (see Figure A.1 in Appendix).

In order to account for heterogeneity due to the sampling of real vacancies, we generated two variables to control for the match between the education requirements of the advertised job (as measured in the recruiter survey) and the hypothetical applicant's educational background. First, a dummy variable measuring whether requirements of the advertised job regarding *field specificity* of the education are met by the hypothetical candidate (horizontal match). Second, a dummy variable capturing the match between the applicant's profile and the advertised job regarding *level* of education (vertical match).

We further control for the occupational field of the job position and a primacy effect we found to be present in our data (dummy variable indicating the 1st and 2nd vignette in the series of ten consecutively rated CVs). Nationality as well as the total time of five years spent in the labour market (employed or unemployed) since leaving formal education are held constant in the experiment. Not at last, every vignette set includes a well matching CV without potentially harmful signals – the fixed vignette, which shows field specific education and work experience, at least upper secondary level of education and no unemployment spell.[7]

Analytical strategy

To examine effects of unemployment spells and having worked in a call centre for a long period on the log transformed ratings of recruiters, we employ random effects multi-level linear regression models (see Auspurg and Hinz, 2015).

[6] In Greece eight vignettes have been assessed by each recruiter.

[7] The introduction of a standardised vignette free from negative signals allows us to control for differences in the quality of the job ad sample between countries and occupational fields

Every recruiter rated multiple vignettes, hence we have to account for clustering at the level of recruiters. Our analytical strategy accounts for the nested nature of our data through recruiter-level random effects and by employing cluster robust and heteroskedasticity robust standard errors. To enable interpretation of our log transformed ratings we calculate corresponding marginal effects of our key research variables – unemployment and having worked in a call centre.

In order to test our hypothesis on the scarring effects of unemployment and deskilling work, we estimate country-specific regression models, which include the main effects of all experimental variables (see Table A1) and selected interaction effects. Please refer to table A.4 (Appendix) for an overview of estimates. In order to measure occupational field specific and educational level specific unemployment effects our models include the two interaction terms of unemployment and occupational field, and of unemployment and educational level, as well as the three-way interaction of occupational field, educational level and unemployment. Further, we control for whether the hypothetical applicants' qualification profile matches the education requirements of the advertised jobs (as measured in the recruiter survey) by interacting unemployment with two dummy variables measuring horizontal (i.e. field of study) and the vertical (i.e. level of education) match between qualifications and requirements. As next, in order to measure education level specific effects of deskilling job experience we include an interaction of the variables for deskilling job experience and applicants' education level. Additional control variables are gender of the applicants, work experience in retail sales sector, the interaction of work experience in retail sales sector and education level, the primacy effect of vignette display and a dummy variable for the fixed vignette. Model one to model four in table A.4 present the regression results of each country separately. Model five include the countries as control variables.

In the following, we focus on graphical representations of the marginal effects for unemployment (see table A.2 for details) and deskilling jobs (see table A.3 for details) taken from the model described above. When interpreting the graphs with the marginal effects, we also rely on post estimation significance tests of the differences between countries, education levels and occupational fields. The marginal effects are calculated by holding constant the horizontal as well as the vertical candidate-job-match, while averaging the other variables at their means. Hence, the reported marginal effects refer to hypothetical job candidates who fulfil all the requirements of the advertised job regarding educational qualifications (level, field of study) and, in the case of the marginal effect of unemployment, regarding job experience.

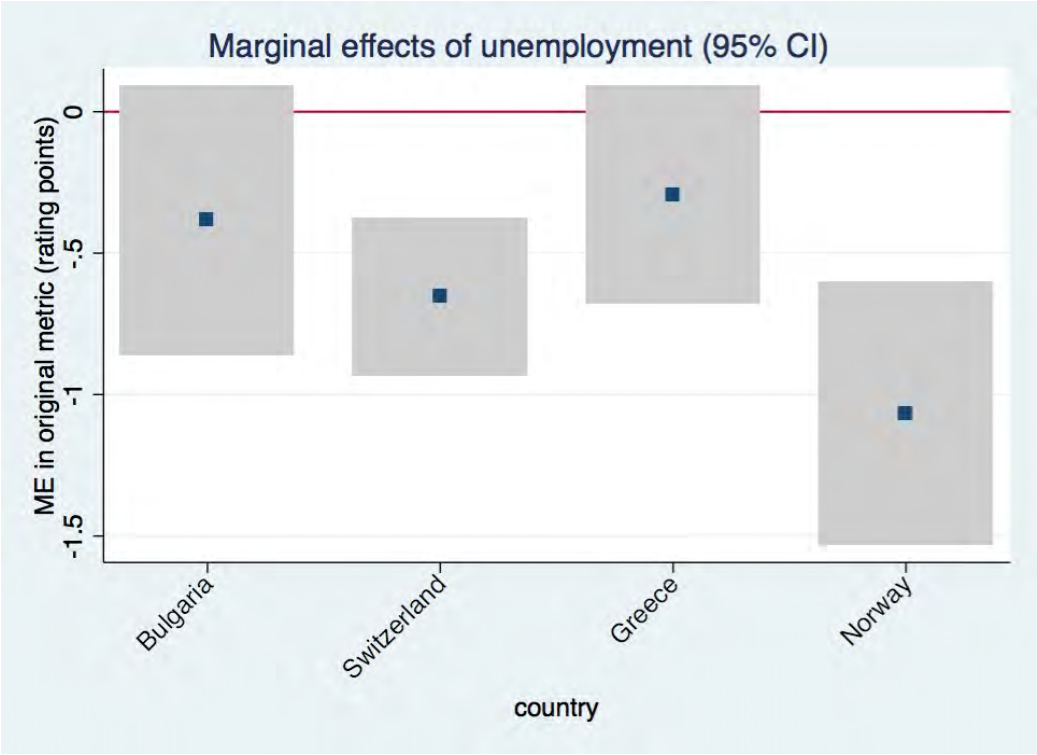
4 Results

In order to facilitate the presentation of our findings, we present marginal effects and their confidence intervals in graphical form. Tables with detailed results can be found in the appendix.

Unemployment and call centre work scarring across countries

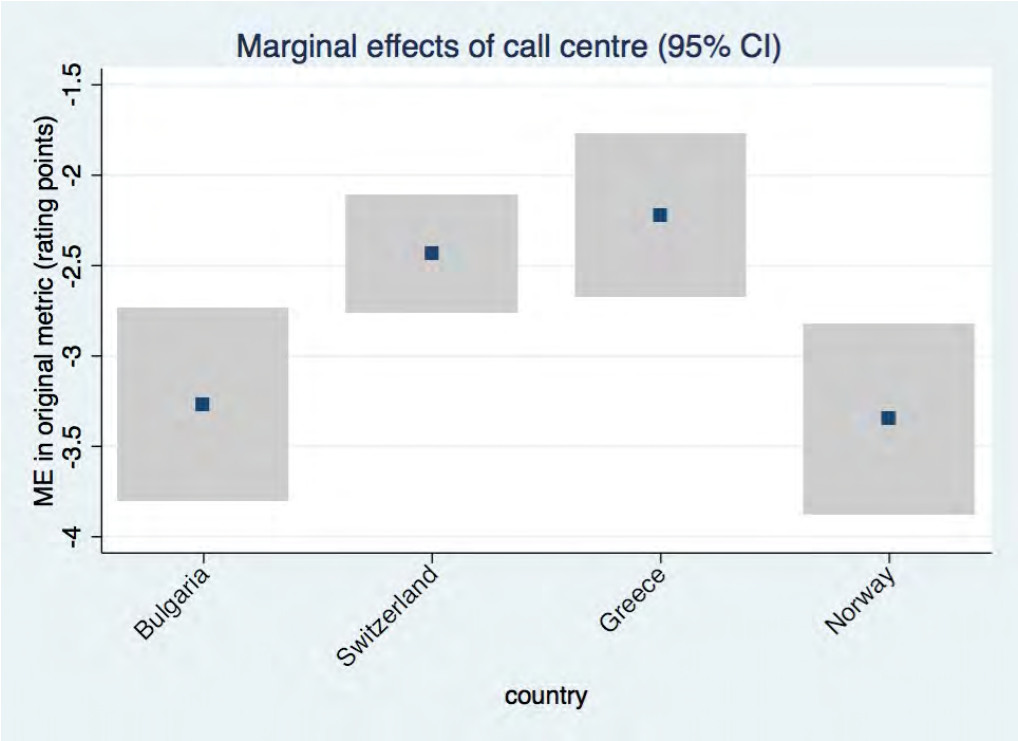
The mean marginal effects of unemployment differ significantly across countries (p = .03) with the strongest scarring by far in Norway with a reduced rating of -1.1 points followed by Switzerland (-0.7; see Figure 1 and Table A.2). The negative effects of unemployment in Bulgaria (-0.4) and Greece (-0.3) are quite small and not significant. The differences in recruiters' evaluation of unemployment between Norway and all other countries are significant, whereas Switzerland differs from Greece only at a significance level of p=0.10 and does not differ from Bulgaria. Results for Bulgarian and Greek respondents do significantly differ.

Figure 1 Marginal effects of unemployment on recruiter rating across four countries.



The negative effect of extensive work experience in deskilling jobs as call centre agent is found to be significant and to decrease applicants' chances to be considered for the advertised skilled positions notably more than experienced unemployment (see Figure 2). This holds for all countries. It should be noted that the scarring effects of unemployment spells of 10 or 20 months while the effect of having worked in a call centre refers to up to five years of work experience. Hence, a direct comparison of the effect sizes is not appropriate. When we consider that unemployment may be expected to be far more scarring than a much longer spell of work experience, the scarring effects of deskilling work are nevertheless of impressive size in all countries. Stronger effects for call centre work are observed in Norway (-3.4) and Bulgaria (-3.3), and substantially weaker effects in Greece (-2.2) and Switzerland (-2.4). Between Norway and Bulgaria on the one hand and between Greece and Switzerland on the other, no differences are found.

Figure 2 Marginal effects of having worked several years in a call centre on recruiter rating.

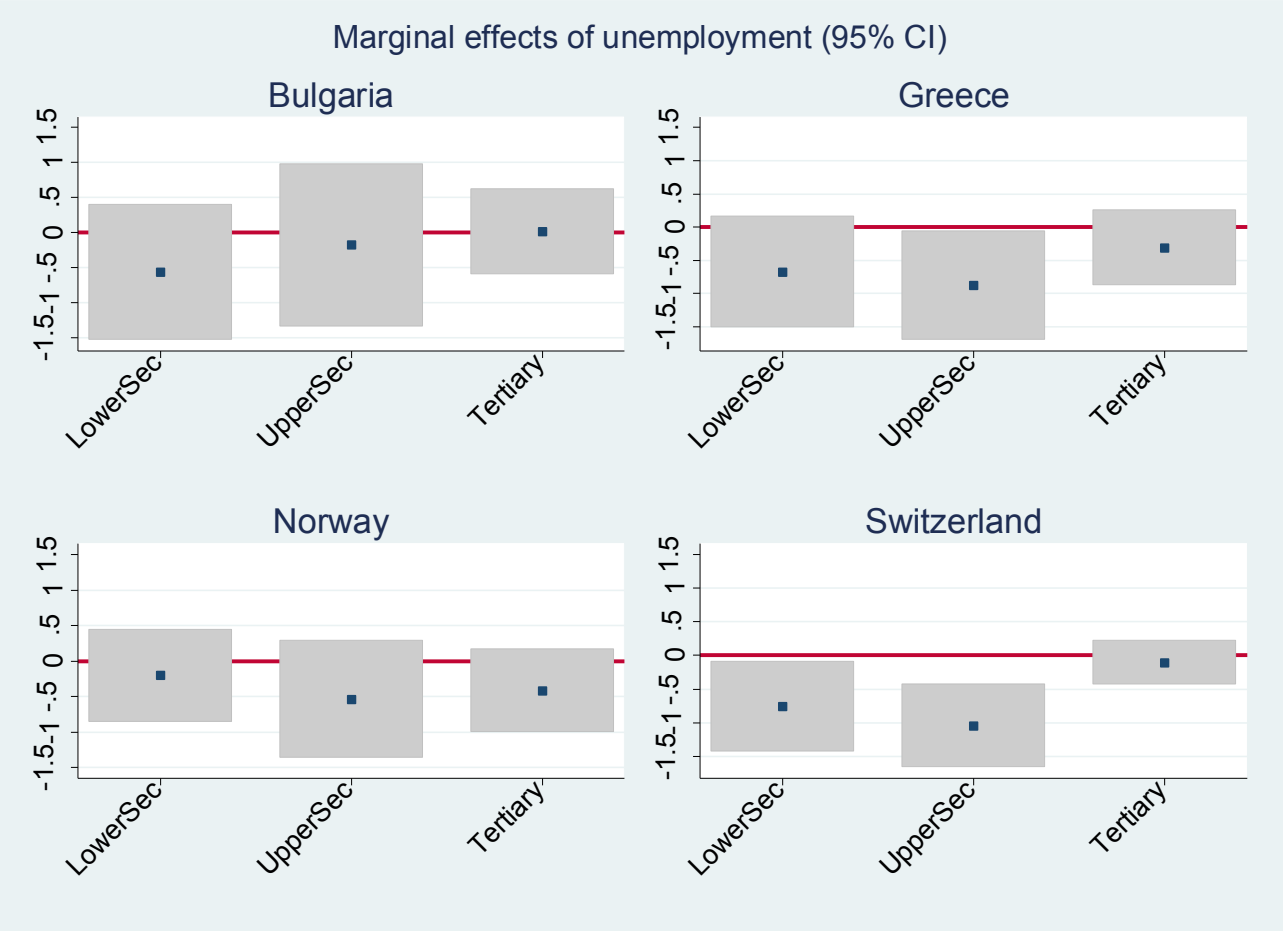


Education as a moderator of scarring effects

When testing for education specific scarring effects (ie. marginal effects) we find moderating effect of education levels on unemployment scarring to be significant only in Switzerland (see Figure 3): The upper secondary degree holders experience the strongest (-1.1) and the tertiary degree holders the weakest (not significant) unemployment scarring (-0.1) (see Table A.2 in Appendix). Although not significant, in Greece

and Norway a tendency of stronger scarring amongst the upper secondary graduates can be observed, whereas in Bulgaria the lower secondary graduates tend to experience the strongest scarring.

Figure 3 Marginal effects of unemployment on recruiter ratings across education level and countries (marginal effects in original metric, i.e., recruiter rating on y-axis in each panel).

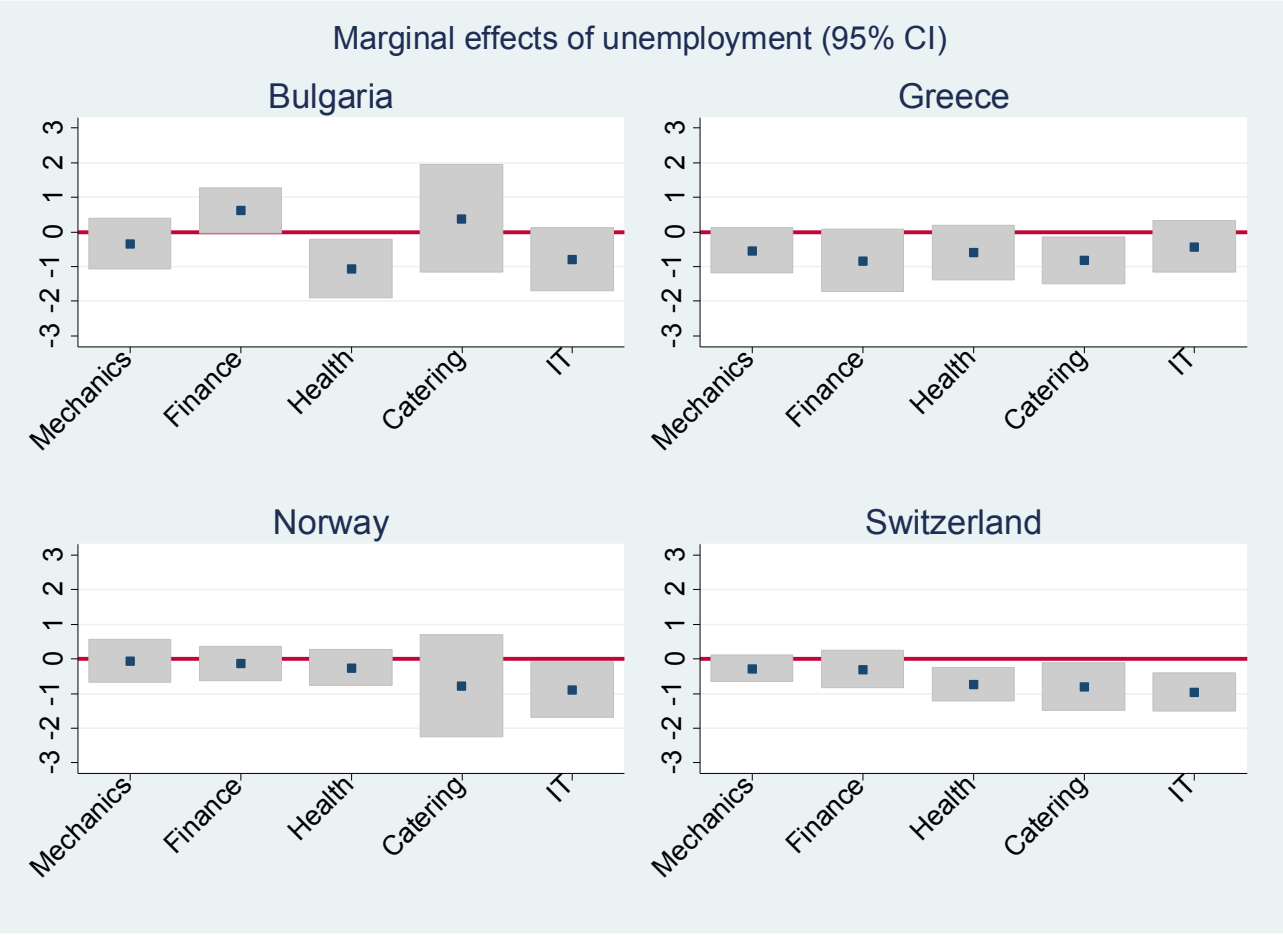


A moderator effect of education on scarring caused by job experience in deskilling jobs is found in all four countries (Table A.3 in Appendix). In Bulgaria and Switzerland it is the group of upper secondary degree holders who experience the strongest scarring (-3.8 in Bulgaria and -3.3 in Switzerland), whereas the tertiary degree holders experience the strongest scarring in Greece (-2.4) and Norway (-2.7). While in Switzerland and Norway the scarring effects differ significantly across all education levels, they do not significantly differ between the lower secondary degree holders and the tertiary degree holders in Bulgaria, and between the lower secondary degree holders and upper secondary degree holders in Greece.

Occupational fields

Unemployment scarring varies across occupations in all countries except in Greece. Averaged over all countries, unemployment is penalised the most by employers hiring for ICT jobs and the least by recruiters in finance (see Figure 4 and Table A.2 in Appendix). The occupational specific unemployment scarring varies across countries. In Bulgaria the marginal effects of unemployment is only significant in the occupational field of nursing with an average rating penalisation of -1.1. In all other occupations the occupation-specific unemployment effects are not significant. In finance the unemployment effect turns out to be positive and of weak significance (p=0.07). In Switzerland the strongest unemployment effects are found in ICT (-1.0), followed by catering (-0.8) and nursing (-0.7). Unemployment does not show significant negative effect in the occupational fields of mechanics and finance. In Greece there are no significant differences in the rating of unemployment between the occupational fields, and only for catering the negative unemployment effect (-0.8) is significant.

Figure 4 Marginal effects of unemployment on recruiter ratings across occupational fields and countries (marginal effects in original metric, i.e., recruiter rating on y-axis in each panel).



In Norway, unemployment ratings differ significantly across occupational fields. But only in the field of ICT does unemployment show a significant negative effect of -0.9. It should be noted that due to limitations in sampling size and, hence, statistical power, effect differences between occupational fields need to be quite large to reach conventional levels of statistical significance. Nevertheless, we have evidence that scarring effects vary between occupational fields for all countries except Greece.

5 Discussion

In line with our hypothesis H1a, assuming stronger scarring effects in countries with lower unemployment rate, we found more pronounced *unemployment scarring* in Switzerland and especially in Norway compared to Bulgaria and Greece. This finding exhorts to be cautious with dramatising unemployment scarring in countries that are especially affected by youth unemployment, at least as far as employer-sided scarring effects are concerned. Also the difference between the both economy-wise well performing countries, with Norway showing stronger detrimental effect of unemployment than Switzerland, supports our hypothesis arguing that if the national unemployment rates are at a comparable level, the strictness of employment protection legislation (stricter EPL in Norway compared to Switzerland) may play a determining role in recruiters' decision whether to employ applicants who have experienced early job insecurity. We could not find the difference between Bulgaria (low protection) and Greece (high protection). A possible explanation could be that the national economic performance has more explanatory power about scarring induced by unemployment, and economic performance below a certain level overshadows the effect of employment protection. Also, it is necessarily to keep in mind that unemployment is measured in the current models with a dummy variable (unemployment or no unemployment). When differentiating between different timings and durations of unemployment the results may vary, hence the present results need to be interpreted with cautious. In addition, Greece has been subjected to deep reforms focused on the expansion of flexible forms of employment against steady and full-time employment, on working hours' flexibility, on layoffs liberation and facilitation, and on changing the way of determining wages through collective bargaining (Kouzis 2014), as part of fiscal discipline policies imposed by the structural adjustment programmes that accompany the Memoranda of Understanding between Greece and its creditors (for more information see Karamessini, Kominou, Papazachariou 2016). In any case, further investigation for the lack of difference between Bulgaria and Greece is needed.

Turning to the scarring effect of *deskilling job experience*, we test two conflicting hypotheses. The first one highlights the overall rate of youth in unskilled jobs, stating that weakest scarring effect should be found in Bulgaria, followed by Greece and Norway and the highest in Switzerland (H1b). The second one draws on employment protection regulation, stating that weaker scarring should be found in Switzerland and Bulgaria and stronger one in Norway and Greece (H2b). We could however not find full support for either H1b nor H2b. Our data show the weakest scarring effects of deskilling job experience in Greece and Switzerland and

stronger scarring in Norway and Bulgaria. We have argued that whether H1b or H2b has more explanatory power might depend on whether a certain threshold of the overall rate of youth in unskilled jobs is exceeded. Yet, due to the small between country variation of young workers unskilled jobs, it is difficult to test this assumption. Also, such threshold might not be a fixed rate, instead it might vary depending on other country specific contextual features such as the unemployment rate or the educational system. Hence the ambivalent result is not entirely surprising. Still, some interpretation is possible: The Norway versus Switzerland pattern may again reflect the difference in the country-specific employment protection regulations: Norway knows high employment protections in contrast to Switzerland. This finding might indicate that in Norway and Switzerland the threshold of youth rate in unskilled jobs is not passed, which allows the effect of EPL to become apparent. Yet, in order to better understand the observed effects, more information about the status and work content of call centre jobs in different countries is necessary. Nevertheless, our findings demonstrate that it is crucial to distinguish between different forms of insecure job experiences, and that their scarring effects are not necessarily driven by the same institutional forces.

Further, we only found a *moderating effect of education* on unemployment scarring for Switzerland, with the strongest unemployment scarring amongst the upper secondary degree holders. In Norway the upper secondary degree holders also show the strongest unemployment scarring, but the differences between the education groups is not significant. Hence, our third hypothesis stating that the signalling of unemployment is particularly negative for the VET diploma holders in countries with highly institutionalised dual-tracked VET systems finds partial support. The insignificant difference between the education groups in Norway may be due to the less developed dual VET system compared to Switzerland. Whereas Swiss dual-tracked VET is organised in companies for the total length of the vocational programme, students in Norway spend two years at vocational schools before they transit to training companies for another two years (Bäckman 2011).

It has been argued that VET graduates in countries with a pronounced dual VET system enjoy high employability, since employers' trust in VET credentials is high. However, we were able to demonstrate that once the upper secondary VET degree holders have experienced *unemployment*, they are penalised with the strongest scarring in comparison to applicants with other education level attainments. In Bulgaria and Greece, but also in Norway, where dual VET is less prevalent than in Switzerland, we did not observe significant differences in employer-sided scarring effects of unemployment between applicants with different education attainments. These results encourage to further investigate the sustainability and long-term consequences of initial VET in countries with a strong dual VET system. Possible explanations could be, first of all, that recruiters do not expect to find non-linear career paths for VET degree holders since the overall job finding rate for VET degree holders is high, and they might interpret such occurrence as a signal for unobservable negative traits of the applicant. Yet, although the upper secondary VET graduates traditionally have enjoyed smooth transition from school to work, they increasingly face more competition with more experienced applicants due to growing complexity in work content and hence increasing job

requirements, as Salvisberg and Sacchi (2014) have shown for Switzerland. If the recruiters' perception and expectations do not adapt with these structural changes, VET degree holders with insecure job experience may face employment difficulties. Second, the industry or even firm specific skills gained during the vocational education and training could be assumed to deteriorate faster than the more general skills acquired in tertiary education. Hence unemployment could be more detrimental for the VET degree holders.

Similarly, it is also the group of upper secondary degree holders in Switzerland, the country with the lowest share of younger adults in unskilled jobs (6%, see Table 1) that experience the strongest scarring caused by *work experience in deskilling jobs*. We find a similar pattern for Bulgaria despite its relatively high share (22%) of unskilled younger workers. In contrast, in Greece and Norway the tertiary degree holders are penalised the strongest if showing call centre experience. More detailed data about the share of graduates of different education level in deskilling jobs in the respective countries is needed in order to better understand our findings. Moreover, call centre work may signify different skill levels in different country contexts and a further literature review on the nature of call centre work in the four analysed countries is needed to improve our hypothesis.

Scarring effect of unemployment varies across occupations in all countries except in Greece. Our hypothesis stated that the strongest scarring effect caused by experienced job insecurity should be found for ICT jobs, due to the assumed fast-paced technological innovation and short cycles of knowledge in this specific sector. Our assumption only finds support in Switzerland and Norway. In Bulgaria and Greece in contrast unemployment scarring is the strongest in nursing and catering respectively..

Next steps

Preliminary analysis of the impact of experienced unemployment on the chances of a candidate's CV to be ranked best show that the negative effect of unemployment becomes two to three times stronger than during the rating process. This finding could indicate that recruiters pay closer attention to experienced unemployment after the first round of CV screening. As in rating, the preliminary results show variations of scarring effects across occupational fields and across education levels, with considerable between-country variation. Previous studies have suggested that the geographical location or the size of the work organisation can impact hiring behaviour (Atkinson et al. 1996). As next steps, we will include additional variables from the recruiter survey, capturing features of the occupational field, the hiring organisation and recruiter characteristics when testing employer-provoked scarring effects of job candidate's experienced insecure job experience. Also, as robustness check, we will account for the degree of difficulty in recruiting within each occupational field and each country.

6 Summary

In this study we have proposed to study four contextual factors that can shape recruiter's evaluation on applicant's insecure labour market experience: The labour market condition measured by the share of young people in unskilled jobs and in unemployment, the employment labour protection legislation, the educational system and its labour market linkage, as well as the belonging of the recruiting work organisations to specific occupational sectors. These factors may in turn influence the hiring outcomes. We have proxied early job insecurity with unemployment and work experience in deskilling jobs (call centre work), which were shown to recruiters in hypothetical CVs. The results show that differences in unemployment scarring between countries are coupled in the first line to the prevalence of youth unemployment. Stronger scars of early job insecurity are found in economic better performing countries Norway and Switzerland that have lower youth unemployment levels compared to Bulgaria and Greece. Second, stronger employment protection might contribute to more pronounced unemployment scarring when the national unemployment rates are taken into account. Further, scarring effect caused by work experience in call centre jobs seem neither be related to a country's share of youth in unskilled jobs nor with employment protection regulations alone. Rather, we suggest that depending on whether a certain threshold of a country's share of young people in unskilled jobs is reached, the effect of unemployment protection unfolds. In addition, we have found moderating effect of education on unemployment scarring only in Switzerland, where the upper secondary education system is strongly dominated by the dual IVET system. Whereas the dual VET system is said to enhance smooth school-to-work transitions for the IVET graduates and to reduce youth unemployment, it is ironically the group of upper secondary VET degree holders who experience the strongest unemployment scarring in Switzerland. Not at last we have found evidence for occupational specific unemployment scarring, which again varies depending on the national context

The findings of this study contribute to the understanding of employer-sides provoked scarring effects caused by insecure job experience with regard to country and occupational field specific settings. The results suggest that it is necessary to distinguish between different forms of employment problems and that a sole focus on unemployment, as it has been the case in previous prevalent labour market research, is not sufficient to fully understand labour market outcomes caused by early job insecurity. The evidence for strong negative effects caused by deskilling job experience contributes to debates around labour market activation policies. It suggests that unemployment measures aiming at a quick labour market reintegration of the young unemployed without consideration of job quality may not be a sustainable solution, since deskilling jobs may be dead-end jobs that do not increase applicants' employability.

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Appendix

Table A.1 Description of experimental variables and their levels.

Experimental variables	Levels of the experimental variables
Level and field specificity of education and work experience	1. Lower secondary education and field specific low skill job experience (credential and job title according to the occupational field) 2. Field specific upper secondary education and field specific middle skill job experience (credential and job title according to the occupational field) 3. Field specific tertiary education and field specific high skill job experience (credential and job title according to the occupational field) 4. Lower secondary education and non field specific low skill job experience (credential and job title from the retail trade sector) 5. Non field specific upper secondary education and non field specific middle skill job experience (credential and job title from the retail trade sector) 6. Non field specific tertiary education and non field specific high skill job experience (credential and job title from the retail trade sector) 7. Lower secondary education and work experience in deskilling jobs (credential according to the occupational field and job title "Call centre agent") 8. Field specific upper secondary education and work experience in deskilling jobs (credential according to the occupational field and job title "Call centre agent") 9. Field specific tertiary education and work experience in deskilling jobs (credential according to the occupational field and job title "Call centre agent")
Duration and timing of unemployment	1. No unemployment 2. 10 months unemployment after graduation 3. 20 months unemployment after graduation 4. 10 months unemployment between jobs 5. 20 months unemployment between jobs 6. 10 months current unemployment 7. 20 months current unemployment
Gender	1. Male 2. Female
National specific variable	1. Bulgaria: Abroad job experience (yes/no) 2. Greece: Participation in active labour market programme during unemployment (yes/no) 3. Norway: Participation in active labour market programme during unemployment (yes/no) 4. Switzerland: Job hopping experience (yes/no)

Table A.2 Marginal effects of unemployment

	Greece	Bulgaria	Switzerland	Norway
Overall	-0.29	-0.38	-0.65 ***	-1.07 ***
	(0. 197)	(0. 244)	(0. 143)	(0. 238)
By Education level				
Lower secondary	-0.67	-0.56	-0.76 *	-0.21
	(0.427)	(0.496)	(0.344)	(0.336)
Upper secondary	-0.88 *	-0.18	-1.05 ***	-0.54
	(0.419)	(0.593)	(0.315)	(0.423)
Tertiary	-0.31	0.01	-0.11	-0.42
	(0.290)	(0.313)	(0.168)	(0.302)
By Occupational				
Mechanics	-0.54	-0.35	-0.28	-0.06
	(0.340)	(0.380)	(0.205)	(0.324)
Finance	-0.83 +	0.61 +	-0.30	-0.14
	(0.470)	(0.340)	(0.278)	(0.263)
Nursing	-0.60	-1.07 *	-0.74 **	-0.25
	(0.412)	(0.439)	(0.255)	(0.274)
Catering	- 0.82 *	0.38	-0.80 *	-0.78
	(0.349)	(0.794)	(0.356)	(0.757)
ICT	-0.43	-0.79 +	-0.96 ***	-0.90 *
	(0.381)	(0.470)	(0.291)	(0.412)

SE in parenthesis

Significance Levels: + p<0.10, * p<0.05, ** p<0.01, *** p<0.001.

Table A.3 Marginal effects of having worked several years in a call centre.

	Greece		Bulgaria		Switzerland		Norway	
Overall	-2.23	***	-3.27	***	-2.44	***	-3.35	***
	(0.231)		(0.272)		(0.166)		(0.271)	
By Education level								
Lower secondary	-1.33	***	-2.17	***	-1.32	***	-0.87	***
	(0.217)		(0.251)		(0.146)		(0.145)	
Upper secondary	-1.62	***	-3.78	***	-3.25	***	-1.51	***
	(0.228)		(0.308)		(0.236)		(0.222)	
Tertiary	- 2.37	***	-2.70	***	-1.81	***	- 2.65	***
	(0.289)		(0.267)		(0.162)		(0.255)	

SE in parenthesis

Significance Levels: + p<0.10, * p<0.05, ** p<0.01, *** p<0.001.

Table A.4 Effects of experimental and control variables on the log transformed ratings of recruiters from random effects multi-level linear regression models with cluster robust standard errors in parentheses. Reference categories in square brackets.

	Greece	Bulgaria	Switzerland	Norway	Overall
Occupational field *[health]*					
Mechanics	−0.133	−0.674 ***	0.125	0.426 **	0.007
	(0.16)	(0.12)	(0.10)	(0.15)	(0.07)
Finance	0.211	−0.767 ***	0.191 +	0.110	0.036
	(0.15)	(0.12)	(0.10)	(0.09)	(0.06)
Catering	0.045	0.350 ***	0.382 ***	0.985 ***	0.419 ***
	(0.16)	(0.10)	(0.10)	(0.14)	(0.06)
IT	−0.156	−0.042	0.465 ***	0.514 ***	0.326 ***
	(0.17)	(0.10)	(0.09)	(0.11)	(0.06)
Vignette education level *[upper secondary]*					
Lower secondary	−0.016	−0.856 ***	−0.421 ***	−0.365 **	−0.491 ***
	(0.14)	(0.12)	(0.11)	(0.11)	(0.06)
Tertiary	0.091	−0.237 *	−0.012	0.594 ***	0.123 *
	(0.13)	(0.11)	(0.10)	(0.12)	(0.06)
Occupation × education *[health × upper secondary]*					
Mechanics × lower secondary	−0.164	0.896 ***	−0.165	−0.193	0.081
	(0.16)	(0.16)	(0.12)	(0.15)	(0.07)
Mechanics × tertiary	−0.064	0.301 *	−0.599 ***	−1.013 ***	−0.470 ***
	(0.17)	(0.15)	(0.14)	(0.18)	(0.08)
Finance × lower secondary	−0.384*	0.879 ***	0.125	−0.033	0.162 *
	(0.18)	(0.18)	(0.12)	(0.10)	(0.07)
Finance × tertiary	−0.027	0.121	−0.708 ***	−0.555 ***	−0.446 ***
	(0.16)	(0.15)	(0.12)	(0.11)	(0.07)
Catering × lower secondary	−0.084	0.634 ***	0.358 **	0.246	0.340 ***
	(0.17)	(0.14)	(0.13)	(0.15)	(0.07)
Catering × tertiary	−0.174	−0.146	−0.371 **	−0.668 ***	−0.421 ***
	(0.16)	(0.13)	(0.13)	(0.16)	(0.07)
IT × lower secondary	−0.098	0.370 **	−0.346 **	−0.045	−0.096
	(0.16)	(0.14)	(0.11)	(0.13)	(0.07)
IT × tertiary	−0.096	−0.282 *	−0.647 ***	−0.578 ***	−0.591 ***
	(0.18)	(0.13)	(0.11)	(0.11)	(0.07)
Unemployed *[employed]*	0.063	0.002	0.108	0.035	0.085 *
	(0.10)	(0.08)	(0.08)	(0.05)	(0.04)

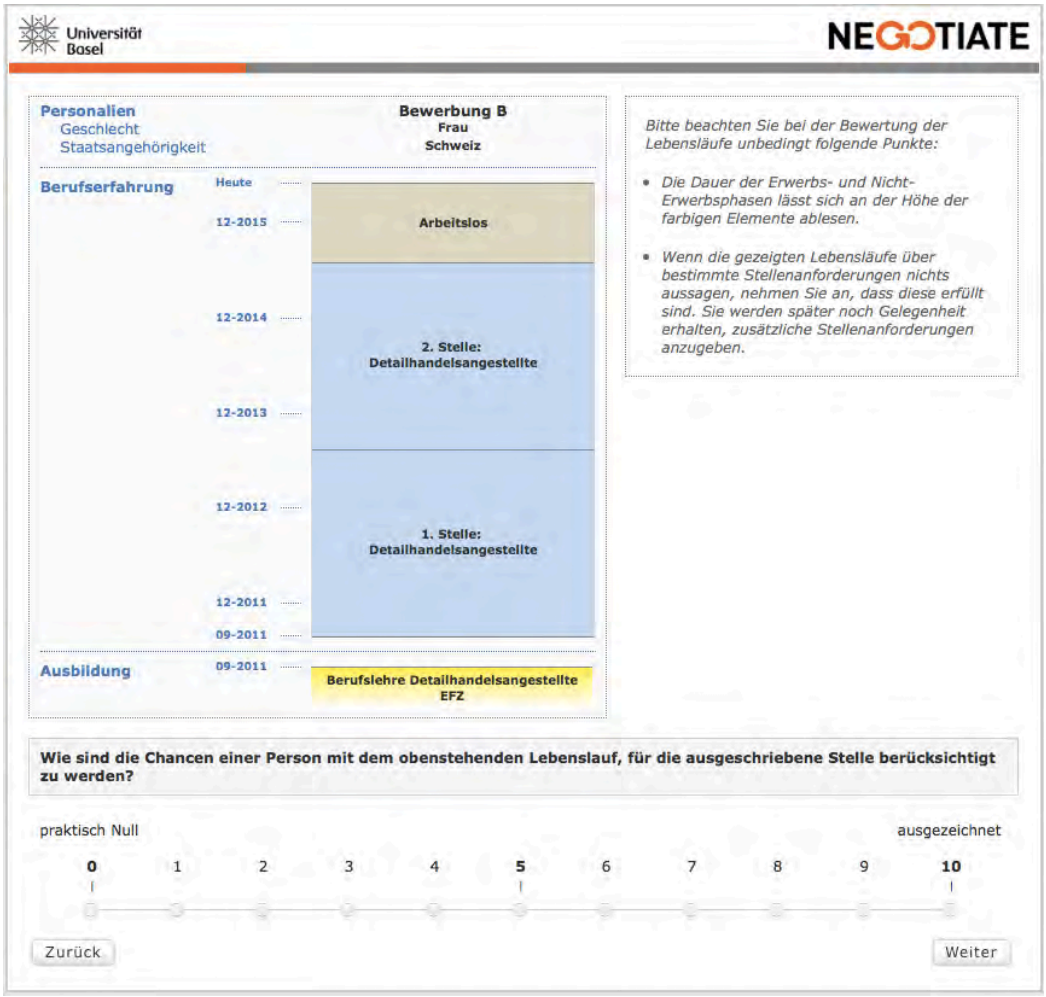
Occupation × unemployed *[health × employed]*					
Mechanics × unemployed	−0.057	0.231 +	−0.153	−0.181	−0.089
	(0.13)	(0.13)	(0.09)	(0.13)	(0.06)
Finance × unemployed	−0.110	0.332 **	−0.102	−0.100	−0.058
	(0.13)	(0.11)	(0.08)	(0.07)	(0.05)
Catering × unemployed	−0.123	0.095	−0.022	−0.125	−0.037
	(0.12)	(0.10)	(0.09)	(0.11)	(0.05)
IT × unemployed	−0.082	−0.197 *	−0.252 ***	−0.200 *	−0.276 ***
	(0.14)	(0.10)	(0.08)	(0.08)	(0.05)
Education × unemployed *[upper secondary × employed]*					
Lower secondary × unemployed	−0.018	−0.049	−0.172 +	0.008	−0.094 *
	(0.14)	(0.10)	(0.09)	(0.07)	(0.05)
Tertiary × unemployed	0.017	−0.155	−0.167 +	−0.265 **	−0.163 **
	(0.14)	(0.12)	(0.09)	(0.09)	(0.05)
Occupation × education × unemployed					
[Health × upper secondary × employed]					
Mechanics × lower secondary × unemployed	0.106	−0.287	0.353 **	0.243	0.163 *
	(0.19)	(0.18)	(0.11)	(0.16)	(0.08)
Mechanics × tertiary × unemployed	0.024	−0.080	0.436 ***	0.448 **	0.296 ***
	(0.18)	(0.17)	(0.12)	(0.15)	(0.08)
Finance × lower secondary × unemployed	0.009	−0.245	0.122	0.111	0.056
	(0.18)	(0.18)	(0.12)	(0.10)	(0.07)
Finance × tertiary × unemployed	0.200	0.223	0.525 ***	0.270 **	0.394 ***
	(0.17)	(0.17)	(0.12)	(0.10)	(0.07)
Catering × lower secondary × unemployed	0.035	0.080	−0.123	−0.152	−0.024
	(0.18)	(0.13)	(0.12)	(0.15)	(0.07)
Catering × tertiary × unemployed	0.150	0.296 +	0.345 **	0.463 **	0.349 ***
	(0.17)	(0.15)	(0.13)	(0.17)	(0.07)
IT × lower secondary × unemployed	0.054	0.270 +	0.393 ***	−0.015	0.299 ***
	(0.18)	(0.15)	(0.11)	(0.13)	(0.07)
IT × tertiary × unemployed	0.239	0.472 ***	0.283 **	0.275 *	0.421 ***
	(0.19)	(0.14)	(0.11)	(0.11)	(0.07)
Work experience in call centre *[other work experience]*	−0.473***	−0.744 ***	−0.804 ***	−0.329 ***	−0.652 ***
	(0.06)	(0.05)	(0.05)	(0.04)	(0.03)
Education × call centre *[upper secondary × other work experience]*					
Lower secondary × work experience in call centre	0.026	0.189 **	0.378 ***	0.070	0.220 ***
	(0.07)	(0.06)	(0.06)	(0.05)	(0.03)
Tertiary × work experience in call centre	−0.231*	0.110	0.190 **	−0.305 ***	0.038
	(0.11)	(0.08)	(0.06)	(0.07)	(0.04)

Work experience in sales *[other work experience]*	−0.440***	−1.008 ***	−1.085 ***	−0.620 ***	−0.874 ***
	(0.08)	(0.07)	(0.06)	(0.08)	(0.04)
Education × sales *[upper secondary × other work experience]*					
Lower secondary × work experience in sales	−0.034	0.420 ***	0.567 ***	0.377 ***	0.426 ***
	(0.09)	(0.08)	(0.07)	(0.09)	(0.04)
Tertiary × work experience in sales	−0.226**	0.110 +	0.306 ***	−0.323 ***	0.043
	(0.08)	(0.07)	(0.06)	(0.10)	(0.04)
Match in occupation specific education *[no match]*	0.254*	0.515 ***	0.046	−0.214 *	0.042
	(0.12)	(0.10)	(0.09)	(0.10)	(0.05)
Unemployed × match in occupation specific education	−0.053	−0.195 *	−0.151 +	0.024	0.009
[Employed × no match]	(0.11)	(0.09)	(0.08)	(0.06)	(0.04)
Match in education level *[no match]*	0.236*	0.321 ***	0.375 ***	0.237 *	0.312 ***
	(0.10)	(0.08)	(0.09)	(0.10)	(0.04)
Unemployed × match in education level	−0.064	−0.036	−0.124	0.075	−0.068 +
[Employed × no match]	(0.09)	(0.08)	(0.08)	(0.08)	(0.04)
Match in occupation specific education and level *[no match]*	0.073	−0.221 *	0.221 *	0.610 ***	0.298 ***
	(0.12)	(0.11)	(0.09)	(0.11)	(0.05)
Unemployed × match in occu. specific education and level	−0.076	0.113	0.095	−0.113	−0.121 *
[Employed × no match]	(0.12)	(0.11)	(0.09)	(0.08)	(0.05)
Male *[Female]*	−0.026	0.034 +	0.007	−0.004	0.007
	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)
Vignette position: first or second *[other position]*	−0.007	−0.066 **	−0.059 ***	0.003	−0.033 **
	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
Fixed vignette *[non-fixed vignette]*	−0.037	−0.015	0.071 +	0.099 *	0.028
	(0.06)	(0.05)	(0.04)	(0.04)	(0.02)
Country *[Bulgaria]*					
Switzerland					−0.351 ***
					(0.03)
Greece					−0.234 ***
					(0.04)
Norway					−0.281 ***
					(0.03)

Constant	1.014***	1.581 ***	0.982 ***	0.696 ***	1.280 ***
	(0.13)	(0.10)	(0.10)	(0.10)	(0.05)
Explained Variance					
R^2 (within)	0.365	0.502	0.487	0.561	0.440
R^2 (between)	0.095	0.360	0.231	0.304	0.244
R^2 (overall)	0.227	0.453	0.392	0.457	0.364
Samplesize (Vignettes)	3,321	5,457	6,258	4,853	19,889

Significance Levels: + p<0.10, * p<0.05, ** p<0.01, *** p<0.001.

Figure A.1 Hypothetical CV as shown in the online-vignette experiment



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